

SUBJECT INDEX

Vol. 129A, Nos. 1-4

(ADL) aerobic dive limit, 771
Abdomen, 811
Absorption, 577
Acid-base balance, 473
ACTH, 399
Acute lung injury, 209
Adhesion, 433
Adiposity, 585
Adult respiratory distress syndrome, 209, 287
Aerobic dive limit, 797, 811
Age effects, 887
Air breathing, 37
Air capillaries, 173
Airbreathing vertebrates, 9
Airway inflammation, 221
Airway patency, 221
Airway resistance, 221
Airway surfactant, 173
Aldosterone, 405
Allele interaction, 295
Allele/environment interaction, 295
Alleles, 295
Allometry, 821
Alveolar architecture, 183
Alveolar duct, 183
Alveolar micromechanics, 183
Alveolar stability, 221
Alveolar surfactant, 173
Alveolar type I, 245
Alveolar type II, 245
Alveolar type II cell, 267
Alveolus, 227
Amino acid absorption, 665
Ammonia excretion, 345, 527
Amniotic fluid, 287
Amphibian, 473, 653
Anti-adhesive, 9
Anura, 519
Apoptosis, 267
Aptenodytes, 811
Arboreal, 519
Arctocephalus galapagoensis, 741
Arteriole, 363
Asthma, 221
AVP, 859
AVT, 859
Axolotl, 141

Bacterial binding, 163
Balaenoptera musculus, 797
Balaenoptera physalus, 797
Balaenopteridae, 797
Basal metabolic rate, 785
Beta-turn, 129
Betaine, 595
Bigeye tuna, 511
Bilayer, 129
Bilirubin, 355
Bird surfactant, 173
Birds, 821
Blaberus, 339
BLES, 209
Blood gases, 473
Blood oxygen binding, 473
Blue whale, 797
Body mass, 919

Body temperature, 75
Bohr effect, 473, 511
Bovine, 577
Broiler chick, 595
Bronchopulmonary dysplasia, 209
Brown adipose tissue, 949
Brush border membrane vesicles, 665
Bubbles, 3
Buffalo, 355
Buffer values, 511
Bufo, 473

C-type lectins, 91
Calcification, 897
Calcium, 313
Calorimetry, 461
cAMP, 843
Capillary, 363
Carbon flux, 487
Cardiac output, 339
Carnivore, 785
Catecholamines, 473
Cathepsin, 495
Cerebellum, 605
Cerebral blood flow, 363
Cerebral cortex, 605
Characterization, 631
Cherax, 843
Chicken, 49
Cholesterol, 9, 49
Circular dichroism, 129
CO₂ release patterns, 681
Cockroach, 339
Collectins, 91, 109
Colubridae, 461
Comparative biology, 695
Compatible solutes, 417
Composition, 49
Conformational microstates, 417
Contraction kinetics, 727
Convergence, 695
Copper, 673
Coral, 487
Cortisol, 399, 405, 859
Cross shelf transport, 305
Crustacea, 843
Crustacean, 909
Crypt size, 933
Cyclic CO₂ release, 681
Cystatin, 851
Cytokines, 287

Dexamethasone, 399
Differentiation, 245, 261
Dipalmitoyl phosphatidylcholine (DPPC), 91
Dipalmitoylphosphatidylcholine, 173, 209
Diurnal rhythm, 653
Diving, 751, 759, 797, 811
Diving ability, 771
Diving behavior, 771
Diving physiology, 771
Docosahexaenoic acid, 313
Dolphin, 785
Domestic dog, 919
Doubly labeled water, 741

Doubly labelled water, 919
Drywood termites, 681
Duodenum, 595

Earthworm, 345
Egg, 313, 461
El Niño, 741
Elaphe carinata, 461
Electrospray ionisation mass spectrometry, 65
Elephant seal, 759
ELISA, 641
EMG, 727
Endotherms, 821
Endothermy, 695
Energetics, 919
Energy, 313
Energy store, 305
Enteroinsular axis, 563
Environmental scanning electron microscopy (ESEM), 933
Epithelium, 141, 595
Erythrocyte membranes, 355
Estradiol-17 β , 641
Evolution, 9, 37, 75, 151, 433
Evolutionary physiology, 695
Exocytosis, 227
Extremophile, 417

Fasting, 933
Fasting metabolism, 829
Fat absorption, 163
Fatty acid, 313
Fatty acid composition, 9
Feeding, 673
Fenoxycarb, 665
Ferritin, 501
FEV₁, 221
Field metabolic rate, 741, 771
Film structure, 195
Fin whale, 797
Fish, 37, 151
Flexibility, 417
Flow-through respirometry, 681
Folate, 673
Follicle-stimulating hormone receptor mRNA, 327
Foraging, 797
Foraging ecology, 771
Freshwater, 843
Functional morphology, 37
Fur seal, 771
Fusion pores, 227
Future, 9

Gadus morhua, 615
Galápagos, 741
Galleria mellonella, 501
Gastric surfactant, 173
Gene regulation, 261
Genomic DNA, 909
Gill, 37
Gills, 859
Glomerular filtration rate (GFR), 405
Glucose, 563, 577
Glucose tolerance test, 563
Glucose-dependent insulinotropic polypeptide, 563

Subject Index

Glutamate dehydrogenase, 345
 Glutamine synthetase, 527
 Glutathione S-transferase, 631
 Glycolysis, 751
 Goat, 355
 Gorgonian, 897
 Granulosa cells, 327
 Growth, 585
 Guinea pig, 65
 Gulf toadfish, 859
 Gut, 151

 Habitat temperature, 417
 Haldane effect, 511
 Hatching success, 461
 Hatchling trait, 461
 Heart rate, 339
 Heat exchange, 557
 Hemodynamics, 363
 Hemoglobin, 511
 Hemolymph, 501
 Hen, 327
 Hepatocyte, 641
 Hepatopancreas, 909
 Herbivore, 785
 Hind-paw stimulation, 363
 Homocysteine, 673
 Hormonal control, 843
 Host defence, 151
 Host release factor, 487
 Human, 65, 355
 Hydrostatic pressure, 751
 Hyperoxia, 363
 Hypoxemia, 605
 Hypoxia, 473

 IGF-I, 585, 887
 IL-1, 391
 Immune molecules, 433
 Incubation, 313, 461
 Infrared, 557
 Innate immunity, 109
 Insect, 339, 501
 Insulation, 821
 Insulin, 563, 585
 Intestinal alkaline phosphatase, 163
 Intestine, 345, 577, 933
 Inulin, 405
 Invertebrate, 897
 Invertebrates, 9
 Ion transport, 843
 Ion-exchangers, 345
 Isolation, 631
 Isotocin, 859
 Isotope, 919
 Isozymes, 631

Jasus edwardsii, 305
 Jejunum, 577, 595, 933

 K⁺/leucine cotransporter, 665
 Kangaroo, 851
 Ketone bodies, 829
 Kidney, 405
 Krill, 373

 Lactation, 851, 919
 Lamellar bodies, 75
 Lamellar body, 227
 Lamnidae, 695
Lampropholis, 313
 Large horse, 563
 Laser-Doppler flowmetry, 363
 Lectin-mediated endocytosis, 615
Leptogorgia virgulata (Cnidaria), 897
 Lipid, 305, 313
 Lipid-protein interactions, 129
 Lipids, 373
 Litter size, 919
 Liver, 949
 Lizard, 49, 313
 Llama fetus, 605
 Locomotion, 759
Lumbricus, 345
 Lung, 3, 37, 91, 141, 151, 227, 261
 Lung Compliance, 9
 Lung development, 261
 Lung injury, 245, 267
 Lung surfactant, 65, 195, 233, 287
 Luteinizing hormone, 327
 Luteinizing hormone receptor mRNA, 327

 Male, 887
 Mammals, 821
 Marine mammal, 785
 Marine mammals, 751
Marmota, 557
 Mass exponent, 541
 Maternal brood care, 519
 Mechanical forces, 261
Meganyctiphanes norvegica, 373
 Mesothelial tissues, 151
 Metabolic compensation, 519
 Metabolic rate, 339, 541, 821
 Metabolisable energy intake, 919
 Metabolism, 771
 Metamorphosis, 653
 Metazoa, 433
 Microbubble clicking stability, 195
 Middle gluteal muscle, 495
 Midgut, 665
 Mitochondria, 949
 Molecular phylogeny, 433
 Monogamy, 541
 Monolayer, 129
 Monolayers, 209
 Monophly, 433
 Morphological study 933
 Morphology, 9
 Morphometrical study, 933
 Multifactorial disease pathogenesis, 295
 Multilayers, 195
 Muscle fibre, 495
 Muscle physiology, 727
 Myelin figure, 109

 Na⁺-K⁺-ATPase, 843
 Namib Desert, 873
 Navigation, 759
 Neonates, 829
 Neuraminidase, 355
 Neuronal, 605

 New Zealand, 305
 Nitric oxide, 391
 Nitric oxide (NO), 605
 Nitric oxide synthase (nNOS), 605
 Nitrogen metabolism, 527
 Non-mammals, 151
 Non-shivering thermogenesis, 949
 Nutritional status, 487

 Ocular melatonin, 653
Odocoileus virginianus, 887
 Offspring, 919
Oncothrixus mykiss, 399
Onymacris rugatipennis rugatipennis, 873
 Oophagous tadpoles, 519
Opsanus beta, 859
Oreochromis mossambicus, 641
 Organs, 373
 Orientation, 759
 Ornithine transcarbamylase, 527
 Osmoregulation, 595, 873
 Otariid, 829
 Ovary, 373
 Ovine, 577
 Ovulatory cycle, 327

 P2Y₂ receptor, 233
 Parental investment, 541
 Past, 9
 Penaeid shrimp, 909
 Phagocytes, 391
 Phagocytosis, 391
 Phenotypic expression, 261
 Phosphatidylcholine, 65, 209, 373
 Phosphatidylglycerol, 65
 Phosphatidylinositol, 65
 Phospholipase C, 355
 Phospholipase C-β3, 233
 Phospholipase D, 233
 Phospholipid, 49, 173, 305
 Phospholipid composition, 9
 Phospholipids, 75, 373
 Photosynthesis, 487
 Phytotelmata, 519
 Pineal, 653
 Pinnipeds, 771, 829
 Plasma melatonin, 653
 Plasma metabolites, 829
 Pony, 563
 Postlarvae, 305
 Power output, 727
 Premature infant, 287
 Prematurity, 209
 Present, 9
 Primary culture, 641
 Progesterone, 327
 Proliferation, 245
 Protease inhibitor, 851
 Protein, 9
 Protein acylation, 129
 Protein catabolism, 829
 Protein degradation, 495
 Protein kinase, 233
 Protein purification, 615
 Protein stability, 417
 Protein-bound iodine, 897

Subject Index

Proteolytic enzymes, 345
Psychrophile, 417
Puerulus, 305
Pulmonary, 227
Pulmonary surfactant, 91, 209
Pulsating bubble surfactometer, 173
Pup growth, 741
Purification, 631, 641
Pyridoxal 5'-phosphate, 673
Python molurus, 673

Qualitative imbalance, 295
Quantitative imbalance, 295

Rabbit, 65
Radio label, 595
Radioimmunoassay, 563
Rainbow trout, 399, 727
Rat, 65, 933
RDS, 295
Receptors, 433
Refeeding, 933
Reindeer, 495
Reproduction, 373
Reptilia, 461
Respiration, 3
Respiratory distress syndrome, 209, 287
Respiratory mechanisms, 37
Respiratory physiology, 681
Resting metabolic rate, 919, 949
Reticulo-endothelial system, 615
Review, 9
RMR, 829
Root effect, 511
Rorquals, 797
Ruminant, 577

Salmon, 585
Salmonid, 727
Saposins, 91
Scaling, 339, 821
Scombridae, 695
Sea anemone, 487
Sea lion, 771
Seasonality, 741, 887
Second messengers, 261
Secretion, 227, 233, 261
Selective breeding, 399
Sequence, 631
Serine dehydratase, 345
Sexual dimorphism, 541
Sharks, 695
Sheep, 355
Signal transduction, 233, 433
Silkworm *Bombyx mori*, 665

Size, 339
Skipjack tuna, 511
Small intestine, 785
Small mammal, 949
Snake, 673
Sodium regulation, 843
Solution hybridization RNase protection assay, 327
Triacylglycerols, 373
Somatosensory activation, 363
Sonomicrometry, 727
SP-A, 109, 295
SP-B, 141
SP-D, 109, 141
Specific oxygen consumption, 541
Specificity, 631
Spicule, 897
Spiny lobster, 305
Squamata, 461
Starch, 577
Starvation, 665
Stress, 399
Stretch, 245
Surface activity, 9, 109, 129
Surface pressure, 221
Surface properties, 91
Surface temperature, 557
Surface tension, 75, 183, 221
Surfactant, 3, 49, 183, 227, 245, 261
Surfactant function, 173
Surfactant inhibition, 109, 221
Surfactant protein A, 295
Surfactant proteins, 91, 151, 209, 287
Surfactant structure, 183
Surpellic, 3
Swim bladder, 37
Swimming, 527, 759
Symbiosis, 487
Syngnathidae, 541
Synthesis site, 909
Synthetic peptide, 129

Tadpole, 653
Teleost fish, 615
Temperature, 9, 391, 473, 811
Temperature effects, 519
Temperature modulation, 681
Tenebrionidae, 873
Testicular fluid, 501
Testosterone, 887
Thermal adaptation, 417
Thermography, 557
Thermophile, 417
Thermoregulation, 557, 821
Three-dimensional, 759
Thyroid, 653
Thyroid hormone, 949

Thyroxine, 653, 897
Tilapia, 641
Tissue elasticity, 183
Toad, 473
Torpor, 75
Transport regulation, 665

Trophic eggs, 519
Tropical environment, 741
TTF-1, 141
Tuberculosis, 295
Tubular myelin, 109
Tunas, 695
Turtle, 49
Type II cells, 261
Type II pneumocyte, 233

Uncoupling protein mRNA, 949
Under-nutrition, 495
Urea, 405, 859
Urea excretion, 527
Urine, 405
Urmetazoa, 433
UT-A urea transporter, 859

Vas deferens, 501
Vasomotion, 557
Vena cava, 811
Ventilation, 245
Vertebrates, 3
Villous size, 933
Vitamin B-12, 673
Vitamin D, 897
Vitellicin, 909
Vitellicine membrane, 501
Vitellogenesis, 909
Vitellogenin, 641
Vitellogenin gene, 909

Water balance, 873
Water conservation, 405
Water flux, 595
Weddell seal, 785
Wet thermal conductance, 821
Whey acidic protein, 851
White-tailed deer, 887
Woodchuck, 557

Yellowfin tuna, 511
Yolk, 313
Yolk granules, 501

Zinc, 673
Zoothellae, 487

AUTHOR INDEX

Vol. 129A, Nos. 1-4

Acevedo-Gutiérrez, A., 797
Albessard, E., 373
Ali, M.K., 355
Alpers, D.H., 163
Alves, C.D., 653
Andersen, J.B., 473
Anderson, P.M., 527
Appel, A.G., 681
Arendse, A.U., 339
Arnould, J.P.Y., 829

Bach, A., 933
Bachofen, H., 183, 195
Balment, R.J., 859
Bauer, M.L., 577
Beckman, B.R., 585
Bernal, D., 695
Bernhard, W., 173
Birchard, G.F., 339
Bourbon, J.R., 151
Bruce, M.P., 305
Butterwick, R., 919

Cai, L., 949
Calvert, E., 345
Cappellozza, S., 665
Carrick, T.R., 399
Casals, C., 129
Casartelli, M., 665
Castellini, J.M., 751
Castellini, M.A., 751
Chailley-Heu, B., 151
Chen, H.-C., 519
Chen, Y.-N., 909
Chevalier, C., 933
Chiu, C.-T., 519
Cook, C.B., 487
Cooper, K.A., 585
Corcoran, M.L., 897
Costa, D.P., 405, 771
Coughlin, D.J., 727
Crocker, D.E., 405
Croll, D.A., 797
Cuzin-Roudy, J., 373

Dühlmeier, R., 563
Daniels, C.B., 1, 9, 49, 75
Davis, R.W., 759, 785
Davy, S.K., 487
Decrock, F., 933
Deegen, E., 563
Dickhoff, W.W., 585
Dickson, K.A., 695
Diemel, R.V., 91
Dietl, P., 227
Ditchkoff, S.S., 887
Dobbs, L.G., 261
Doi, O., 327
Du, W.-G., 461
Dunel-Erb, S., 933

Edwards, Y.S., 245, 267
Engle, M.J., 163
Enhorning, G., 221
Eves, D., 345
Evjen, G., 615

Fiandra, L., 665
Fields, P.A., 417
Figueroa, J.P., 605
Fisher, J.A., 851
Floros, J., 295
Forry, J.A., 727
Freihorst, J., 173
Fuhrmann, H., 563
Fuiman, L., 785
Fuiman, L.A., 759

Gales, N.J., 771
Galleguillos, M., 605
Giordana, B., 665
Glumoff, V., 287
Goebel, M.E., 771
Goto, H., 327
Graham, J.B., 695
Green, J.A., 829
Greenaway, P., 843
Gutierrez, J.A., 261

Haagsman, H.P., 91
Haller, T., 227
Hallman, M., 287
Harmon, D.L., 577
Harris, M.B., 37
Haun, J., 785
Heath, J.E., 557
Heeley, E.L., 65
Heiskari, U., 495
Ho, J.W., 631
Hou, J., 949
Houser, D.S., 405
Huang, C., 949
Hughes, G.M., 3
Huntington, G.B., 577

Ikegami, M., 109

Janssens, P.A., 851
Jeffs, A.G., 305
Jensen, F.B., 473, 511
Ji, X., 461
Johnston, K.E., 673
Johnston, S.D., 49

Kam, Y.-C., 519
Kamiyoshi, M., 327
Kanno, I., 363
Kashikura, K., 363
Keough, K.M.W., 129
Kettunen, H., 595
Kim, B.H., 641
Kim, B.Su., 501
Kim, H.R., 501
Kingsley, R.J., 897
Knower, T., 811
Kohin, S., 785
Kooymann, G.L., 741
Korfhagen, T., 109
Kou, G.-H., 909
Krider, K.L., 897

Kriechbaum, K.L., 897
Kuo, C.-M., 909

Laurent, P., 859
Laurent, P., 933
Le Boeuf, B.J., 759
Le Maho, Y., 933
Lee, C.Seok., 501
Leonardi, M.G., 665
Levenson, D.H., 811
Li, N., 949
Li, Q., 949
Lin, P.-Y., 519
Lindström, M., 495
Liu, J., 949
Liu, X., 949
Llanos, A.J., 605
Lo, C.-F., 909
Lochmiller, R.L., 887

Müller, W.E.G., 433
Masonjones, H.D., 541
Masters, R.E., 887
Matsuura, T., 363
Mayzaud, P., 373
McCartney, R.J., 313
McCormack, F.X., 109
McDonald, M.D., 859
McGlinchey, S.M., 727
McLeod, K.R., 577
Miller, L.-A.D., 141
Miyamoto, K., 327
Mizutani, T., 327
Mo, J.Ling., 843
Mondal, S., 391
Murray, A.W., 267
Muths, E., 851

Nag, K., 209
Nagy, T.R., 673
Naidu, S.G., 873
Nicholas, K.R., 851
Nichols, P.D., 305
Niemenen, M., 495

O'Donnell, R., 345
Orgeig, S., 1, 9, 75

Pérez-Gil, J., 129
Pöö, A.R., 495
Palaniyar, N., 109
Park, W.Mock., 501
Perry, S.F., 37
Peuranen, S., 595
Pfaller, K., 227
Phillips, P.K., 557
Plasencia, I., 129
Pohronezny, J.A., 727
Ponganis, P., 739
Ponganis, P.J., 811
Possmayer, F., 195, 209
Postle, A.D., 65, 173
Pottinger, T.G., 399

Qanbar, R., 209

Author index

Rämet, M., 287
Rai, U., 391
Rau, G.A., 173
Rawlins, D.R., 829
Reich, C., 851
Remmers, J.E., 37
Riquelme, R., 605
Rivas, L., 129
Rivera, P.M., 751
Rodriguez, K., 209
Rooney, S.A., 233
Russell, K.J., 313

Sánchez, G., 605
Sallmann, H.-P., 563
Sanhueza, E., 605
Saporetti, K.A., 727
Scantlebury, M., 919
Schürch, S., 183, 195, 209
Schleucher, E., 821
Secor, S.M., 673
Shadwick, R.E., 695
Shaw, D.C., 851
Shearer, K.D., 585
Shelton, T.G., 681
Smedsrød, B., 615
Smits, A.W., 1
Soveri, T., 495

Speake, B.K., 313
Speakman, J.R., 919
Spicer, L.J., 887
Sørensen, K.K., 615
Straus, C., 37
Sun, R., 949
Sutherland, L.M., 267

Tagami, M., 327
Takeishi, M., 327
Takemura, A., 641
Tamura, T., 673
Taylor, J., 345
Tayyab, S., 355
Tershy, B.R., 797
Thompson, M.B., 313
Tiilonen, K., 595
Tillinghast, E.K., 345
Todgham, A.E., 527
Tollersrud, O.K., 615
Trillmich, F., 741
Trott, J., 851
Tseng, D.-Y., 909

Urbán-Ramírez, J., 797

Valenzuela, M.A., 605
Van Dam, R.P., 811

Walsh, P.J., 859
Wang, G., 295
Wang, J.-R., 519
Wang, T., 473
Wang, Y., 859, 949
Wang, Z., 949
Warne, J.M., 859
Webb, P.M., 405
Wert, S.E., 141
Whitsett, J., 109
Whitsett, J.A., 141
Widdel, A., 563
Williams, T.M., 759, 785
Wilson, R.J.A., 37
Wilton, D.C., 65
Withers, P.C., 821
Wood, C.M., 859
Wright, M.L., 653
Wright, P.A., 527

Yamamura, N., 327
Yen, C.-F., 519
Yeo, S.Moon., 501
Yuen, W.Keung., 631
Yun, C.Young., 501

Zhang, S., 949